S/171-x/60/013/002-3/001/005
E193/E435

Investigation of Electrodeposition of Metallic Gallium From Aluminate Solutions. Part I

ASSOCIATION: Institut khimii Sovnarkhoza ArmSSR
(Institute of Chemistry, Sovnarkhoz, ArmSSR)

SUBMITTED: April 8, 1960

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S/171-x/60/013/002-3/002/005
E193/E435

AUTHORS: Manvelyan, M.G. and Yeganyan, A.G.

TITLE: Cathodic Polarization During Deposition of Gallium From Gallate Solutions. Part II

PERIODICAL: Izvestiya Akademii nauk Armyanskoy SSR, Khimicheskiy nauki, 1960, Vol.13, No.2-3, pp.91-99

TEXT: In continuation of the work described in Part I (pp.81-90 of the same issue) the present authors studied the polarization overvoltage for electrodeposition of gallium on tungsten, platinum, nickel and Armco iron at 7, 12, 18 and 25°C. The curves obtained by plotting overvoltage η_k against log i, where i denotes the current density, (see Fig.2 and 3) are all characterized by deflection points. This indicates that polarization is probably associated with two processes which can be described by $Ga^{+++} + 3e \rightarrow Ga$ and $H^+ + e \rightarrow H$. The $\eta_k/\log i$ relationship obtained can be described by Tafel's equation $\eta_k = a + b \log i$, with the values of a and b changing at the deflection point. The transfer coefficients of the cathodic reaction α, determined for electrodeposition of metallic gallium on solid electrodes from the temperature-dependence of the

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S/171-x/60/013/002-3/002/005
E193/E435

Cathodic Polarization During Deposition of Gallium From Gallate Solutions. Part II

electrolysis rates, were 0.5 to 0.8 for the first (lower) and 0.4 to 0.55 for the second (upper) portions of the η_k/log i curves. The values of the activation energy for the process (determined from the linear relationship log i versus 1/T) indicated that both electrochemical and concentration polarization take place during electrodeposition of Ga from alkaline gallate solutions on tungsten, platinum and nickel. In the case of deposition of gallium on Armco iron, the formation of a new phase can be inferred from the log i versus 1/T relationship, and polarization is in this case related to the energy of formation of the new phase. There are 5 figures, 2 tables and 13 references: 12 Soviet and 1 German).

ASSOCIATION: Institut khimii Sovnarkhova ArmSSR
(Institute of Chemistry, Sovnarkhoz, ArmSSR)

SUBMITTED: April 8, 1960

Card 2/2

S/171/62/015/005/001/008
E071/E592

AUTHORS: Manvelyan, M.G. and Yeganyan, A.G.

TITLE: Cathode polarization of gallium in gallate solutions at temperatures above the melting temperature of gallium. Communication 3

PERIODICAL: Akademiya nauk Armyanskoy SSR, Izvestiya. Seriya khimicheskikh nauk. v.15, no.5, 1962, 411-414

TEXT: Cathode polarization during the precipitation of gallium from gallate solutions (0.01 M Ga and 2.6 N NaOH) at 30, 40, 50 and 60°C on solid electrodes (Pt, W, Armco iron) was investigated by the compensation method in the vapour with saturated calomel electrode, using a previously described apparatus (Izv.AN ArmSSR, KhN, 13, 91, 1960). Each of the curves relating the potential to the logarithm of the current density consisted basically of three linear sections. These curves depended on temperature: the increase of which led to the decrease of the polarization potential. The coefficients of transfer of electrode processes were found to be in the range 0.75-2.02 for the first section of the curves, 0.22-0.57 for the second and 0.2-1.01 for the third section. Plotting $\log_e I$ vs. 1/T (where I velocity of

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electrochemical processes, T - absolute temperature) at a constant potential, a smooth and gradual transition of the phase, chemical and concentration polarizations on platinum and tungsten and phase polarization on Armco iron cathodes was observed. There are 4 figures.

ASSOCIATION: Institut khimii Sovnarkhoza ArmSSR
(Institute of Chemistry of Sovnarkhoz ArmSSR)

SUBMITTED: August 15, 1962

S/171/62/015/006/001/006
E021/E492

AUTHORS: Manvelyan, M.G., Yeganyan, A.G.

TITLE: Cathodic polarization during the deposition of gallium from aluminate solutions. 4th Report

PERIODICAL: Akademiya nauk Armyanskoy SSR. Izvestiya. Khimicheskiye nauki, v.15, no.6, 1962, 501-510

TEXT: The electrodeposition of gallium direct from aluminate solutions with an Al:Ga ratio of 35:1 and 25:1 and an Al:NaOH ratio of about 1:3 was studied. Solid electrodes of platinum, tungsten nickel and armco iron were used for the deposition which was carried out between 0 - 20 and 30 - 60°C. Within 0 to 20°C the graph relating log current density to overpotential consisted of two parts obeying the Tafel equation. The values of the transport coefficient of the electrode processes were found to be within the limits of 0.46 to 0.8 for the first part of the curve and 0.35 to 0.45 for the second part depending on the cathode material. These results were similar to those pertaining to pure gallate solutions at temperatures up to 25°C. The cathode potential-log. current density curves at 30, 40, 50 and 60°C consisted of three

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Cathodic polarization ...

linear portions, the values of the transport coefficients being within 1.51 to 0.5 for the first portion, 0.58 to 0.33 for the second portion and 0.46 to 0.11 for the third portion. The values for the second portion were in good agreement with those for the second part of curves obtained during deposition of gallium from pure gallate solutions up to 25°C. The values of the effective activation energies showed that both electrochemical and concentration polarisation took place during electrodeposition of gallium on platinum, tungsten and nickel from aluminate solutions at 0 to 60°C. The process depended on the time of the discharge of gallium and/or hydrogen ions and their rate of diffusion. The change in energy of activation in relation to the change in polarisation at 0 to 20°C was lower in comparison with pure sodium gallate solutions at 7 to 25°C, which was attributed to the change in the energy barrier produced by the hydrated anions. The increase in the effective activation energy at 30 to 60°C was explained by convection. It was also shown that during electro-deposition of gallium on armco iron at 0 to 60°C, a new phase was formed during electrocrystallisation. Polarisation in that case depended on the energy of formations of this new phase. There

Cathodic polarization ... S/171/62/015/006/001/006
E021/E492

are 6 figures and 2 tables.

ASSOCIATION: Institut khimii Sovnarkhoza ArmSSR
(Institute of Chemistry Sovnarkhoz ArmSSR)

SUBMITTED: August 20, 1961

Card 3/3

L 57544-65 EWT(m)/EWP(t)/EWP(b) IJP(c) JD/JG

ACCESSION NR: AR5015152 UR/0137/65/000/005/G015/G015

SOURCE: Ref. zh. Metallurgiya, Abs. 5G36

AUTHOR: Yeganyan, A. G.

TITLE: Separation of gallium from aluminate solutions by an electrolytic method

CITED SOURCE: Tr. 3-go Vses. soveshchaniya po khimii i tekhnol. glinozema. Yerevan, 1964, 373-386

TOPIC TAGS: gallium, aluminate, electrolyte, electrolysis, dissociation potential, tungsten electrode, platinum electrode, iron electrode, cathodepolarization

TRANSLATION: Dissociation potentials were measured for the following electrolytes: (1) $GaCl_3$, 0.003 molar in gallium and 0.08 molar in hydrochloric acid; (2) $NaGa(OH)_4$, 0.01 molar and higher in gallium and 2.5-2.6 normal in sodium hydroxide; (3) $NaAl(OH)_4 + NaGa(OH)_4$, 2.5-2.6 normal in sodium hydroxide, with a ratio Al:NaOH = 1:3, and a ratio Al:Ga of about 42:1. Potentials were determined for the separation of gallium from these electrolytes on tungsten, platinum, and

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Armco iron electrodes. The dissociation potential of electrolyte 3 corresponded to the dissociation potential of electrolyte 2 under the same conditions. The separation potential of gallium from electrolyte 3 at a ratio Al:Ga = 42:1 is equal to the separation potential of gallium from electrolyte 2; however, the yield of gallium with respect to the current falls with an increase in the ratio Al:Ga from 35:1 to 50:1. The cathode polarization during precipitation of gallium from electrolytes 2 and 3 on tungsten, platinum, and Armco iron was measured. Results of working up the data by the temperature kinetic method indicate the presence of chemical and concentration polarization, and in the case of Armco iron cathode, also phase polarization. 15 figures, 2 tables, 8 literature titles. (From R. Zh. Khimiya)

ENCL: 00

SUB CODE: MM

Card 2/2

L 41558-65 EWT(d)/EWT(m)/EWP(v)/EPF(c)/EWA(d)/EPR/EWP(j)/T Pc-4/Pr-4/
Ps-4/Pt-7 WW/EM/RM
ACCESSION NR: AP5007681 S/0032/65/031/003/0372/0374

53
52
B

AUTHOR: Yeganyan, I. L.

TITLE: Device for determining moduli of elasticity and internal friction at high temperatures in a magnetic field

SOURCE: Zavodskaya laboratoriya, v. 31, no. 3, 1965, 372-374

TOPIC TAGS: modulus of elasticity, magnetic field, material, material strength, elastic deformation

ABSTRACT: The author describes equipment for determining moduli of elasticity and internal friction at high temperature in a magnetic field (1000 oersteds). Principal components of the device are shown schematically in Fig. 1 on the Enclosure. The device is based on electrostatic excitement and the revealing of the torsional frequency of the specimen. Cylindrical or prismatic specimens (diameter = 5-15 mm; length = 100-200 mm) may be tested. The device is capable of accuracies of the following order: modulus of elasticity 0.1%, deflection modulus 0.2%, and internal friction 0.1-0.5%. In the figure, 1 is the specimen held by insulated, cooled coupling rods 2; 3 is a 0.005-mkf condenser which supplies a variable potential (120-200 volts) to the sonic generator 4 (type 3 - 2A). A variable torsional force

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L 41558-65
ACCESSION NR: AP5007681

is created at the left end of the specimen, causing oscillation of the specimen at the same frequency as that of the variable potential. The right end of the specimen (by varying the capacitance of a second condenser) creates a polarizing potential of 300 volts. Components 5 through 9 are parts used for relaying information about the process, while 10 through 14 are components in the system for controlling ambient test conditions of excitation frequency and temperature and for temperature measurement. The modulus of elasticity of a given specimen is determined from the formulae $E = \frac{4 l^2 f_l^2 \rho A^2}{981 \cdot 10^8}$, $A = 1 + \left(\frac{\mu \pi r}{2l}\right)^2$, where f_l is the characteristic frequency of longitudinal oscillation of the specimen; $l = l_0 (1 + \alpha t)$ - length of specimen; ρ - density of specimen; α - coefficient of thermal expansion; A is the Rayleigh correction; r - specimen radius; μ-Poisson coefficient. Orig. art. has: 2 figures and 5 equations.

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy institut im. I. P. Bardina (Central Scientific Research Institute)

SUB CODE: ME, EM

SUBMITTED: 00 ENCL: 01

NO REF SOV: 005 OTHER: 000

Card 2/3

S/169/63/000/001/022/062
D263/D307

AUTHORS: Aleksandryan, A.A., Yeganyan, Ts.A. and Kocharyan, V.T.

TITLE: Solar radiation at the Dilizhan spa in the summer

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 1, 1963, 19, abstract 1B119 (Tr. Yubileyn. plenuma Uch. med. soveta M-va zdravookhr. ArmSSR, posvyashch. 40-letiyu ustanovleniya Sov. vlasti v Armenii. T.I. Yerevan. 1961, 87-96)

TEXT: The results are given of the intensities of full direct, ultraviolet, visible, and infrared solar radiation, in dependence of the elevation of the sun, at Dilizhan, during the summers of 1958-1960. The measurements were carried out by thermoelectric and photoelectric methods.
[Abstracter's note: Complete translation]

Card 1/1

16(1)
AUTHOR: Yeganyan, V.V. SOV/22-11-6-4/10

TITLE: On the Plane Elasticity Problem for the Semicircle (K ploskoy zadache teorii uprugosti dlya polukruga)

PERIODICAL: Izvestiya Akademii nauk Armyanskoy SSR, Seriya fiziko-matematicheskikh Nauk, 1958, Vol 11, Nr 6, pp 3-14 (USSR)

ABSTRACT: The author considers the plane state of stress in a semicircle, the boundary of which is arbitrarily loaded. According to Ya.S. Uflyand [Ref 1] the author uses bipolar coordinates for the solution. The normal stresses on the boundary are explicitly expressed by Fourier integrals. The following special cases are separately considered : a.) A semicircle, the round boundary of which is subject to constant pressure, and the diameter is subject to an exponentially variable stress. b.) A semicircle, the whole boundary of which is exponentially stressed.

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On the Plane Elasticity Problem for the Semicircle SOV/22-11-6-4/10

There are 7 figures, and 5 references, 3 of which are Soviet, and 2 English.

ASSOCIATION: Yerevanskiy politekhnicheskiy institut imeni Karla Marksa (Yerevan Polytechnical Institute imeni Karl Marx)

SUBMITTED: March 20, 1958

Card 2/2

YEGANYAN, V. V., Cand Tech Sci (diss) -- "The plane problem in the theory of elasticity for a region bounded by arcs of two intersecting circles". Yerevan, 1959. 18 pp (Yerevan Polytech Inst im K. Marks), 150 copies (KL, No 10, 1960, 130)

YEGANYAN, V.V.

Plane problem in the theory of elasticity for a circular hole. Sbor. nauch. trud. ErPI no. 20:191-203 '59. (MIRA 14:5)
(Strains and stresses)

YEGANYAN, V.V.

One-dimensional problem in the theory of elasticity for an eccentric ring. Izv. AN Arm. SSR.Ser.fiz.-mat.nauk 17 no.1:63-74 '64.
(MIRA 17:3)

1. Vychislitel'nyy tsentr AN Armyanskoy SSR i Yerevanskogo gosudarstvennogo universiteta.

YEGANYAN, V.V.

General solution of a problem in elasticity theory for an infinite plane with an alveolar hole, along which are applied some given stresses. Izv. AN Arm. SSR. Ser.fiz.-mat. nauk 17 no.4:35-41 '64. (MIRA 17:11)

1. Vychislitel'nyy tsentr AN Armyanskoy SSR i Vychislitel'nyy tsentr Yerevanskogo gosudarstvennogo universiteta.

YEGANYAN, V.V.

General solution to a problem in the theory of elasticity involving an infinite plane with two circular holes subjected to the action of specified forces. Izv. AN Arm. SSR. Ser. fiz.-mat. nauk 18 no.6:11-18 '65.

(MIRA 19:1)

1. Armyanskiy sel'skokhozyaystvennyy institut.

YEGANYAN, Yu. L.

Changing the drive in filters used for rough cleaning of oil. Avt. transp. 36 no.3:30 Mr '58. (MIRA 11:3)
(Automobiles--Engines--Oil filters)

SOV/122-58-6-6/37

AUTHORS: Kruglov, M.G., Candidate of Technical Sciences, Docent; and Yeganyan, Yu.L., Engineer

TITLE: Investigation of Loop Scavenging of a Two-stroke Engine by means of a Running Single-cycle model (Issledovaniye petlevoy produvki dvukhtaktnogo dvigatelya na dinamicheskoy odnotsiklovoy modeli)

PERIODICAL: Vestnik Mashinostroyeniya, 1958, Nr 6, pp 22-25 (USSR)

ABSTRACT: Loop-scavenging tests were carried out with the help of a model test rig provided with a special device, electromagnetically controlled, for the additional feeding of air into the cylinder when the piston passes through the upper dead point. The cylinder pressures were detected by a barium-titanate transmitter, the pressures in the exhaust manifold, by a capacity transmitter. The degree of mixing was measured by gas analysis after scavenging with carbon dioxide. Eight models with different designs of the scavenging ports were tested at 1 000 rpm at scavenging pressures between 1.06 and 1.2 kg/cm^2. Figure 2 shows the cross-sectional area of the scavenging and exhaust ports plotted against the crank angle. All but the eighth model have the same maximum cross-sectional areas. The scavenging air consumption, the residual gas coefficient

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Investigation of Loop Scavenging of a Two-stroke Engine by means of a Running Single-cycle Model

and the charging coefficient are plotted against the scavenging air pressure in Figures 4, 6 and 7. The residual gas coefficient is plotted against the excess scavenging air coefficient in Figure 5. The residual gas coefficient and the charging coefficient are plotted against the speed in Figures 8 and 9 for model Nrs 5 and 8, chosen as the most suitable designs. The main factors describing the scavenging process for these two models are compared in a table, either at the same scavenging air flow or at the same scavenging air pressure. Model Nr 8 appears superior by virtue of a higher scavenging efficiency and a higher charging coefficient. There are 9 figures and 1 table.

Card 2/2 1. Internal combustion engines--Analysis 2. Interal combustion engines--Test methods

KHUGLOV, M.G., kand. tekhn. nauk; YEGANYAN, Yu.L., inzh.

Dynamic single-cycle model engines used in studying the gas exchange in two-cycle engines. [Trudy] MVTU no.83:116-132 '58. (MIRA 11:6)
(Gas and oil engines)

YEGANYAN, Yu. L., Candidate Tech Sci (diss) -- "Investigation of gas exchange in a two-stroke tractor engine with a loop gas-scavenger". Moscow, 1959. 10 pp (Min Higher Educ USSR, Moscow Order of Lenin and Order of Labor Red Banner Higher Tech School im N. E. Baumman), 150 copies (KL, No 23, 1959, 166)

YEGANYAN, Yu. L.

11(1); 26(4) PHASE I BOOK EXPLOITATION SOV/3049

Moscow. Vysshoye tekhnicheskoye uchilishche

Povysheniye moshchnosti i uluchsheniye ekonomichnosti dvigateley vnutrennego sgoraniya; doklady i soobshcheniya na nauchno-tekhnicheskoy konferentsii kafedry "Dvigateli vnutrennego sgoraniya" MVTU imeni Baumana (Increasing the Output and Improving the Economy of Internal Combustion Engines; Reports and Transactions Presented at the Scientific and Technical Conference Held by the Department of Internal Combustion Engines, MVTU imeni Bauman) Moscow, Mashgiz, 1959. 219 p. Errata slip inserted. 4,500 copies printed.

Ed.: A.S. Orlin, Doctor of Technical Sciences; Ed. of Publishing House: L.I. Yegorkina; Tech. Ed.: V.D. El'kind; Managing Ed. for Literature on Automotive, Tractor, and Agricultural Machine Building: I.M. Bauman, Engineer.

PURPOSE: This collection of articles is intended for scientific and engineering personnel of research institutes and machine-building plants.

COVERAGE: The collection contains reports and papers dealing with better economy and greater capacities for internal combustion engines. Experimental results are stated and their effectiveness evaluated. The conference took place in 1957. The introduction to the collection contains short summaries of the articles. No personalities are mentioned. References follow several of the articles.

Chursin, N.M. [Doctor of Technical Sciences, MVTU imeni Bauman]. Generalized Characteristics of Turbopiston Engines 138

The author analyzes factors affecting the performance of turbopiston engines. Indicator efficiency is computed, and methods of determining performance coefficients are stated.

Dmitriyevskiy, A.V. [Engineer, NAMI]. Double Exhaust as a Device for Increasing Coefficients of Power Output and Economy in Piston Engines 154

The author analyzes discharge coefficients for a four-stroke carburetor engine with the flow of gases through both the exhaust valves and the ports in the lower end of the cylinder. Comparison is made between DN engines, designed for double exhaust, and the standard "Moskvich-402" engine. The author concludes that double exhaust saves 20 percent more fuel.

Bogunov, S.G. [Candidate of Technical Sciences, Docent]. Measurement of Air Flow Through Cylinders 187

Mironov, A.P. [Engineer, NATI]. Experimental Study of Mixture Formation in Turbulence Combustion Chambers 192

The author reports on results of a study of the mixture-formation process by means of high-speed photography.

Stolbovskiy, V.V. [Engineer, TsKB]. Some Research Done on Engines With High R.P.M. Coefficients 196

The author reports on tests and results obtained with high-r.p.m. engines and outlines some attempts to increase engine performance and fuel economy. Six types of Soviet motorcycle engines (S-154, S-155, S-254, S-257, S-354, and S-555) are analyzed, and their specifications are given.

Yeganyan, Yu.L. [Engineer, MVTU imeni Bauman]. Study of the Gas-exchange Process in a Dynamic One-stroke Model 208

Kos'min, S.Ya. [Engineer, NAMI]. Study of the Interaction Between Two

YEGANYAN, Yu.L.; KRUGLOV, M.G.

Investigating loop scavenging of tractor-type two-cycle diesel engines. Nauch.dokl.vys.shkoly; mash. i prib. no.1:6-17 '59. (MIRA 12:8)

(Diesel engines--Testing)

ORLIN, A.S.; KRUGLOV, M.G.; YEGANYAN, Yu.L.

Investigating the gas exchange in two-cycle diesel engines with loop scavenging. Trakt.i sel'khozmash. 30 no.2:5-8 F '60. (MIRA 13:5)

(Diesel engines)

YEGANYAN, Zh.E.

Station of communist labor. Zhel.dor.transp. 43 no.3:64-67 Mr '61. (MIRA 14:3)

1. Nachal'nik stantsii Kamenolomni.
(Kamenolomni--Railroads--Employees)

YEGAREVA, N. V.

"Bird's-Foot Trefoil (Lotus corniculatus) as a Fodder Plant in Leningradskaya Oblast." Cand Agr Sci, Leningrad Veterinary Inst, Leningrad, 1953. (RZhBiol, No3, Oct 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (10)

So: Sum. No. 481, 5 May 55

YEGAREVA, N.V., kandidat sel'skokhozyaystvennykh nauk.

Germinating force of common bird's foot trefoil seeds as affected by the length of storage. Agrobiologiia no.6:135 N-D '56. (MLRA 10:1)

1. Leningradskiy veterinarnyy institut.
(Lotus) (Germination)

YEGASAROVA, A. A. Docent.

"Recent Results in the Treatment of Syphilis with Penicillin and by the Chronic Intermittent Method."

Vestnik vererologii i dermatologii. /Bulletin of Venerology Dermatology/, No 1, Moscow, February-January 1954 (bimonthly).

YEGAY, A.G.

23

PHASE I BOOK EXPLOITATION SOV/5690

Akademiya nauk Kazakhskoy SSR. Institut yadernoy fiziki.

Metallovedeniye i obrabotka metallov davleniyem (Physical Metallurgy and Pressworking of Metals) Alma-Ata, 1961. 183 p. (Series: Trudy Instituta yadernoy fiziki, t. 4) 2,450 copies printed.

Resp. Eds.: I. G. Grinman and A. A. Presnyakov; Resp. Secretary: V. V. Chervyakova; Eds.: M. Ya. Brailovskaya and T. I. Shevchuk; Tech. Ed.: Z. P. Rorokina.

PURPOSE: This book is intended for scientific research workers, technical personnel in industry, and students and aspirants interested in problems of physical metallurgy and the pressworking of metals.

COVERAGE: The book, Volume IV of the Transactions of the Institute of Nuclear Physics, Academy of Sciences Kazakh SSR, contains papers reviewing problems of physical metallurgy. Attention is given to a consideration of metal ductility, strength, phase transformation, and the ordering of various alloys, and to a discussion of the diffusion mechanism of the plasticity. Experimental findings concerning strength, deformation, and external friction in the working of non-ferrous metals and alloys are included in papers dealing with metal rolling.

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SOV/5690

Physical Metallurgy and Pressworking of Metals

Problems of automatic inspection and control of multidraft wire-drawing frames are also considered. Most of the papers are accompanied by references, the majority of which are Soviet.

TABLE OF CONTENTS:

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Physical Metallurgy and Processing of Metals SOV/5089

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SOV/5590

Physical Metallurgy and Pressworking of Metals

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Physical Metallurgy and Pressworking of Metals SOV/5690

AVAILABLE: Library of Congress

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VK/wrc/mas
11-22-61

S/137/62/000/003/083/191
A006/A101

AUTHOR: Yegay, A.G.

TITLE: Choke acceleration of electric motors with up to 100 kw phase rotors with the aid of electromagnets М О 300 БПВ(МО 300В PV) 40%, 220 v

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 3, 1962, 26, abstract 3D142 (Tr. In-ta yadern. fiz. AN KazSSR", 1961, v. 4, 151 - 157)

TEXT: In connection with the automation of the drawing practice the control of mills under starting conditions has a great practical importance. Stand and industrial tests of choke acceleration up to 100 kw power with the aid of electromagnets MO 300B carried out on drawing machines and mills show the reliability of the drive and smooth start of the mill. It is possible to regulate the equivalent dynamic moment by changing the air gap of the electromagnet. At present, the Cheboksary Plant of electric equipment is producing the following choke acceleration sets: panel ППВ5004-23АИ(PPV5004-23AI), force circuit 75 amp, 380 v; control circuit 127 v; and furthermore respectively: ППВ5005-43АИ (PPV5005-43AI), 250 amp, 380 v, 127 v; ППВ5006-43АИ(PPV5006-43AI), 225 amp, 380 v, 127 v; and ППВ5007-43АИ(PPV5007-43AI), 300 amp, 380 v, 127 v.

[Abstracter's note: Complete translation]

K. Ursova

Card 1/1

GRINMAN, I.G.; YEGAY, A.G.; MIKHAYLOVA, L.S.; OVSOV, Yu.V.

Problems of automatic control in the drawing industry. Trudy Inst.iad.fiz.AN Kazakh.SSR 4:122-125 '61. (MIRA 14:8)
(Wire drawing) (Automatic control)

YEGEN'YEV, Pavel; AITOV, B., redaktor; FEOFILAKTOV, A., tekhnicheskiy redaktor.

[On the banks of the Volga; sketches] Na beregakh Volgi; ocherki. Kazan', Tatgosizdat, 1952. 35 p. [Microfilm]. (MIRA 9:6)
(Volga River)

SOV/112-59-2-3287

21(3)

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 2, p 151 (USSR)

AUTHOR: Aradenne, M., Yeger, G., Isayev, B., Roggenbuk, V., and Froylikh, G.

TITLE: Pocket-Type Gamma-Radiation Dosimeter (Karmannyy dozimetr gamma-izlucheniya)

PERIODICAL: V sb.: Issled. v oblasti dozimetrii ioniziruyushchikh izlucheniy. M., AS USSR, 1957, pp 112-114

ABSTRACT: A pocket-type electrometer with a quartz filament and a reading microscope is described. The electrometer has a linear scale calibrated in milliroentgens. The scale span is 0-200 milliroentgens. Thirty experimental models of the instrument were tested. The charge leakage never exceeded 5% per day. The reading spread of individual meters did not exceed 10%.

N.G.Z.

Card 1/1

86497

S/079/60/030/011/001/026
B001/B066

5.4700 2209, 1018, 1043

AUTHORS: Morozova, M. P. and Yeger, G.

TITLE: Formation Enthalpy and Formula-weight Volumes of Low Vanadium Oxides

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 11, pp. 3514-3517

TEXT: The determination of the formation enthalpy of vanadium oxides meets with certain difficulties, since the only suitable calorimetric reaction, the oxidation, is not completed, and yields products of a phase composition which is not quite clear. Besides, a microcalorimeter had to be used (Ref. 1). The present paper investigates low vanadium oxides. As initial products, vanadium iodide was used which had been carefully hydrogenated with purified hydrogen for better pulverization, and vanadium oxide which had been obtained by reduction of vanadium pentoxide. The thoroughly pulverized mixture was pressed to tablets which were annealed in a vacuum resistance furnace with tantalum heater for 2 hours at 1660°C. The composition of the preparations was established by determining

Formation Enthalpy and Formula-weight Volumes of Low Vanadium Oxides

S/079/60/030/011/001/026
B001/B066

the increase in weight on their oxidation to vanadium pentoxide. The heats of combustion were determined in the vacuum microcalorimeter described in Ref. 1 (Table 1). Table 2 gives the formation enthalpies of vanadium oxides determined by various authors. The data obtained by the authors of the present paper agree with those of Refs. 1 and 2; the latter are given in the tables published by the American Office of Standards. The densities determined in the vacuum pycnometer and the formula-weight volumes of vanadium oxides calculated from them are presented in Table 3. The diagram shows the formation enthalpy and the formula-weight volume as a function of the oxide composition. It could not yet be determined what is represented by the composition $VO_{0.30}$. It must be noted that the formation enthalpy and the formula-weight volumes of the products, which lie within the homogeneous range of vanadous oxide poor in oxygen ($VO_{1.00}$ - $VO_{0.86}$), practically correspond to the values of formation enthalpy and formula-weight volumes of the mixtures of VO of the stoichiometric composition ($VO_{1.00}$), and to the oxide of the composition $VO_{0.33\pm0.03}$ (Ref. 8). The kind of dependence of the formation enthalpy

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Formation Enthalpy and Formula-weight Volumes of Low Vanadium Oxides

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and the formula-weight volumes on the composition is thus determined for the range V - $VO_{1.142}$. There are 1 figure, 3 tables, and 9 references: 6 Soviet, 1 US, 1 Danish, and 1 German.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet (Leningrad State University)

SUBMITTED: January 3, 1960

Card 3/3

1. YEGER, K. O., Eng.

2. USSR (600)

4. Kilns, Rotary

7. Design for a new rotary kiln.
TSement 18 No. 5, 1952.

9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

YEGER, S.M

84-8-7/36

AUTHOR: Yeger, S., Chief of OKB Division

TITLE: Tu-110 (Subtitle: New Planes [Novyye samolety])

PERIODICAL: Grazhdanskaya Aviatsiya, 1957, Nr 8, pp. 8-9 (USSR)

ABSTRACT: The Experimental Design Bureau (Opytno-konstruktorskoye byuro) of Academician A. N. Tupolev, twice Hero of Socialist Labor, has released the Tu-110 passenger turbojet aircraft for arterial air routes. The new aircraft has been derived from the Tu-104 turbojet and is superior to the latter in operating economy, range and reliability because of its higher power rating. The aircraft is powered by four turbojet engines created by the design group under the leadership of A. M. Lyul'ka, general designer. This amount of power can handle a much higher take-off weight with a payload reaching 12 tons. The new Tu-110 can carry 100 passengers (7,500 to 8,000 kilograms), 1,600 to 2,000 kg of luggage, and 2,000 to 2,900 kg of mail or cargo. During the take-off, if one of the engines fails, the plane will continue to ascend with a vertical

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Tu-110 (Cont.)

speed of 5-6 meters per second. The engines, two on each side, in contrast with theTu-104, are not supported by the fuselage but by load bearing ribs of the center section. The wing center section was therefore increased by 1,200 mm on each side. Air for inboard engines is supplied through ducts in the wing center section. The air duct for outboard engines is of same construction as in Tu-104. The nose of the fuselage of Tu-110 is longer; hence the cabin is also longer, by 1,210 mm than the Tu-104. In the Tu-104 and Tu-104A the galley is in the central part of the fuselage; in the Tu-110 the galley and buffet are in the front part of the plane, and supplies are loaded through the front door. Nevertheless, the galley is comprised in one pressurized section with the passenger cabins. A partition separating the cockpit from the rest of the plane was placed on bulkhead No. 11. There are altogether 3 passenger compartments in the Tu-110. The first one, for 30 people, is located between the front spar and bulkhead No. 15. The central passenger compartment can accommodate 15 people; the rear compartment, equipped for 55 passengers, is like the rear compartment in Tu-104A.

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Tu-110 (Cont.)

The tail of the Tu-110 has two cloak-rooms and two toilet rooms. The drainage cistern has a capacity of 250 liters and is filled with 20 liters of chemical agents. The cistern is equipped with two electric pumps of the БЦН-1 type and a filter. The wash-basins are supplied from an 80 liter cistern. To increase the luggage compartments (placed under the first and the third passenger cabins), the floor of the cabins was raised by 140 mm and was lowered in the luggage compartments; as a result, the total height of the luggage compartment was increased by 210 mm and the total capacity of the two luggage compartments is now 28 cubic meters. The performance specifications are as follows: the range, with 12 tons of payload, is 3,100 to 3,300 kilometers, the supply of fuel is carried for one additional hour of flight; at an altitude of 10,000 to 12,000 meters; the cruising speed is 800 km per hour; the maximum speed is 1,000 km per hour; if the distance to be covered is less than 2,700 km, the flight speed can be maintained at 900 km per hour. According to calculations of GosNII of the GVF, the carrying cost of a ton/kilometer in the Tu-110 (at full payload of 12 tons) is essentially the same as in any

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turbo-prop aircraft. Moreover, turbojet planes can be used for short hops, i.e., for distances between 1,000 and 2,700 km, with similar commercial results. Two diagrams on page 8 show (vertically and horizontally) a cross-sectional view of the new Tu-110. A photo on page 9 shows an inside view of one of the passenger compartments.

AVAILABLE: Library of Congress

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YEGER, S.M.

New phase in the development of aviation science and engineering.
Priroda 46 no.9:63-68 S '57. (MLRA 10:8)

1. Opytno-konstruktorskoye byuro, Moskva.
(Airplanes--Design and construction)
(Tupolev, Andrei Nikolaevich, 1888-)
(Jet transports)

YEGER, S.

85-10-15/35

AUTHOR: Yeger, S., Leading Designer

TITLE: Airliner "Tu-110" (Magistral'nyy samolet "Tu-110")

PERIODICAL: Kryl'ya Rodiny, 1957, Nr 10, pp. 14-15 (USSR)

ABSTRACT: The author of this article describes the new passenger jet airliner "Tu-110", which soon will be in operation on domestic and international air routes. This airliner was designed by the A.N. Tupolev's designing bureau on the basis of the "Tu-104" airplane. The "Tu-110" has four turbo-jet engines, as compared with the two engine "Tu-104". Its thrust is one and a half times greater than that of the "Tu-104". The increase of the electric armament permits to increase considerably the take-off weight of the airplane on account of the useful loading, which reaches 12 tons. The serial airliners "Tu-110", which are being produced, are intended for the transportation of 100 passengers. The speed of the "Tu-110" is 800 km per hour on flight routes of 3,100-3,300 km and can be made at 900 km per hour speed on flight routes of 1,000-2,700 km. A trip from Moskva to Tashkent will last

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85-10-15/35

Airliner "Tu-110"

3-4 hours instead of 3-4 days. The air liner has three cabins: the forward cabin has 30 seats, the middle cabin has 15 seats and the rear cabin has 55 passenger seats. Inside the air liner the pressure and the temperature are automatically controlled. The baggage and the cargo space is located in the fuselage, under the floor of the passenger cabins. The main constructive elements of the "Tu-110", the wing, tail and chassis are the same as in the "Tu-104". The air liner "Tu-110" is outfitted with the most up to date pilotage, navigation and radio equipment. An automatic pilot, instruments securing blind landing in fog or rain, automatic radio compasses, radio stations operating on short and ultra-short waves are installed on this air liner. The high aerodynamic characteristics of this airliner secure good stability and controllability at all regimes of flight. Its maximum speed is 1,000 km per hour. This article is illustrated by a photo, showing the exterior side-view of the airliner, and by two drawings, showing the elevation and the plan of the airliner's interior.

AVAILABLE: Library of Congress

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S/084/62/000/004/001/002
D045/D112

AUTHOR: Yegor, S., Section Chief of a Design Bureau

TITLE: The Tu-124 - a medium-range commercial transport jet aircraft

PERIODICAL: Grazhdanskaya aviatsiya, no. 4, 1962, 10-13

TEXT: The components, design features and performance of the Ty -124 (Tu-124) medium-range commercial transport jet aircraft are described. The power plant consists of 2 turbofan engines, consuming about 15-25% less fuel than РД-3М(RD-3M) turbojet engines. Double-slotted flaps increase the wing lift on take-off and landing. The take-off run is 700-800 m and the landing run the same, due to low landing speed and the use of spoilers and the landing gear wheel brakes. Complete opening of the flaps by 40° reduces the landing speed to 160-200 km/hr. There is a crew of 2 pilots, a navigator and steward. The basic version is a 44-seater, 3-compartment aircraft (12,8 and 24 seats respectively) with a load capacity of 5 t. The

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economy-class model seats 52-60 passengers and has a load capacity of 6-7 t. Landing aids and an autopilot are fitted in the crew cabin and flights in bad weather can also be made. The aircraft structure has a high fatigue strength due to the use of Д-16 (D-16) aluminum-copper alloy for the lower wing surface and high-strength aluminum-zinc alloy for the upper wing surface. The flight range is 1500 km at a take-off weight of 33.2 t (including 5 t commercial load), and the cruising speed is 800-900 km/hr. Non-stop flights of up to 2500 km can be made if the commercial load is reduced and the maximum amount of fuel is available. Airfields with runways, 1500-1600 m long, are required for the Tu-124, which can land and take-off on concrete and earth runways. There are 7 figures.

RODNYANSKIY, L.M.; YEGER, S.M.

Review of "Design of airplane hydraulic devices" by T.M.Bashta. Vest. mashinostr. 43 no.11:90 N '63. (MIRA 17:2)

L 1594-66 ENT(d)/ENT(m)/EWP(w)/FA/EWP(v)/T-2/EWP(k)/EWP(h)/EWA(h)/ETC(m) WW/EM

AM5007583 BOOK EXPLOITATION UR/ 629.138.5.001.12 (022)

44 55

YEger, Sergey Mikhaylovich

Designing passenger jet aircraft (Proyektirovaniye passazhirskikh reaktivnykh samoletov) Moscow, Izd-vo "Mashinostroyeniye", 1964. 451 p. illus., biblio., tables. Errata slip inserted. 3500 copies printed.

TOPIC TAGS: passenger aircraft, jet aircraft, aircraft tail, aircraft engine, aircraft performance, aerodynamic noise, flight control system, aircraft wing, aircraft cabin equipment

PURPOSE AND COVERAGE: The book presents the peculiarities of the passenger jet aircraft designing methods while distinguishing them from other designation aircraft designing methods. In particular considered are aircraft of high subsonic speeds and high quality selection methods for alternative arrangements of arrowhead wings. Efficiency problems and factors affecting the economy of passenger aircraft are analysed. The problems of aerodynamic composition and the flight characteristics of passenger jet aircraft in respect to safety and life are examined. Some chapters deal with the noise and safe flight at high altitudes. The book is intended for engineering and technical workers

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of aviation industry. It can also be used by students of aviation institutes.

TABLE OF CONTENTS (abridged):

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AM5007583

SUB CODE: AC SUBMITTED: 17Oct64 NO REF SOV: 010

OTHER: 038

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L 08118-67 EWT(d)/EWP(m)/EWT(m)/EWP(f)/EWP(h)

ACC NR: AP6030282 SOURCE CODE: UR/0084/66/000/009/0008/0011

AUTHOR: Yeger, S. M. (Doctor of technical sciences)

ORG: none

48
B

TITLE: From the TU-104 to the TU-154

SOURCE: Grazhdanskaya aviatsiya, no. 9, 1966, 8-11, and 16-17

TOPIC TAGS: passenger aircraft, turbojet aircraft, civil aircraft data, turbofan engine, aircraft engine/TU 154 aircraft, Kuznetsov turbofan engine

ABSTRACT: The Tupolev TU-154 has three rear-mounted Kuznetsov turbofan engines of 9500-kg static thrust each. The monocoque wing contains five fuel tanks, with a total capacity of 33,150 kg, and four reserve bag tanks for an additional 7150 kg of fuel. Normal operational characteristics include a take-off weight of 80,000 kg (consisting of 40,200 kg empty weight, 1500 kg of equipment and crew, 16,000 kg of payload, and 22,300 kg of fuel), a cruising speed of 900 km/hr at a 11,000 to 12,000-m altitude, and a range of 3300 km. In this case, its take-off run is 800 m at sea level and at +15C, but the length of concrete runway should be 1250 m. Normal landing weight is 62,000 kg, and the landing run is estimated at 600 to 800 m. The fuselage contains two passenger compartments with seat arrangements for 158, 146, and 134 passengers; two pressurized luggage sections with a total volume of 38.5 m, and one 5.6-m unpressurized section. The aircraft is manned by a basic crew of three. Among the special features discussed in some detail are an auxiliary

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L 08118-67
ACC NR: AP6030282

power plant, an integrated piloting system, automatic station-finding and self-tuning radio equipment, and wing control surfaces. Total operational time is estimated at 30,000 hr for the TU-154 airframe and 10,000 hr for each engine; maintenance is prescribed every 5,000 hr for the airframe and every 2,000 hr for each engine. The general configuration of the TU-154 and its size compare roughly with the TU-104B, and therefore repair and maintenance facilities can be used for servicing both types. A cargo version of TU-154 is in the planning stage. It will have a large side door, a reinforced floor, and carry a payload of 25 tons 2000 to 2500 km at 900 km/hr. Orig. art. has: 5 figures. [SA]

SUB CODE: 01, 21/ SUBM DATE: none/

Card 2/2 nst

YEGER, Tomas; FAT'YANOV, V.V., red.; VLASOVA, N.A., tekhn.red.

[Using concrete in radiation shielding; collection of articles] Beton v tekhnike zashchity ot izluchenii; sbornik. Moskva, Izd-vo glav.upr. po ispol'zovaniiu atomnoi energii pri Sovete Ministrov SSSR, 1960. 91 p. (MIRA 13:3)

1. Russia (1923- U.S.S.R.) Glavnoye upravleniye po ispol'zovaniyu atomnoy energii.
(Concrete) (Shielding (Radiation))

15(6) SOV/131-58-11-2/9

AUTHORS: Glebov, S. V., Timofeyev, N. N., Yeger, V. G.

TITLE: Specially Dense and Stable Ladle Bricks of "Kremnevka", of the Borovichi Deposit (Osoboplotnyy stoykiy kovshevoy kirpich iz borovichskoy "kremnevki")

PERIODICAL: Ogneupory, 1958, 23 Nr 11, pp 494-497 (USSR)

ABSTRACT: Huge deposits of kaolinite materials in form of "sukhari" and "kremnevki" are found in the region of Borovichi in the USSR. The use made of them is both wrong and unsatisfactory. The content of Al_2O_3 which is higher than in kaolinites is characteristic of "kremnevka", as well as its increased refractoriness (beyond 1750°) and the complete lack of plasticity.
Composition and properties of "kremnevka": It consists of hard pieces which do not have any plasticity and do not soften in water. Its absorption of water amounts to 5-12%. The percentages of the average chemical composition of "kremnevka" are the following: SiO_2 - 49,1; Al_2O_3 - 47,7; TiO_2 - 1,0; Fe_2O_3 - 0,84; CaO - 0,44; MgO - 0,23; R_2O - 0,71. Its refractoriness reaches 1760° and its specific weight is 2,612. As to refraction of

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Specially Dense and Stable Ladle Bricks of "Kremnevka", of the Borovichi Deposit

light this material is quite close to kaolinite. The dependence of sintering and shrinking of "kremnevka" on temperature is shown in the figure.

Composition and properties of "kremnevka" samples. The test results of samples of 14 different materials are listed in the table. In order to check the results obtained, bricks of regular size were made of material Nr 14 by the same process used for the samples (burned at 1550°). Having low porosity (below 14%) and exceptionally low permeability to gas, these bricks are characterized by a high Al_2O_3 content and great mechanical strength.

Production and checking of an industrial series of ladle bricks. The experimental series was produced in the Department Nr 4 of the Semilukskiy ogneupornyy zavod (Semilukskiy Plant for Refractory Products). The various processes in the production are described in detail as well as their chemical composition. The data obtained were the following: shrinking of bricks - 2,1%; refractoriness - 1750°; specific weight - 2,36-2,41 g/cb.cm; average porosity - 12,2%; permeability to gas - 0,05; slag

Specially Dense and Stable Ladle Bricks of "Kremnevka", of the Borovichi Deposit

erosion: by weight - 156 g, volumetrically - 81 cb.cm. The sample bricks were tested in the lining of three 70-ton steel-teeming ladles. In comparison to conventional ladle bricks, these bricks showed an increase of stability by 7%.
Conclusions: The experiments proved that specially dense and stable steel-teeming ladle bricks can be made of "sukhari" and "kremnevki" of the Borovichi deposit; that the production of these bricks can be introduced in the Borovichi Kombinat; that it is necessary to equip the departments of the plant with tube mills, a tunnel kiln for high temperatures and hydraulic presses. There are 1 figure, 1 table, and 4 references, 3 of which are Soviet.

ASSOCIATION: Leningradskiy institut ogneuporov (Leningrad Institute of Refractory Materials)

YEGER, V.G.

15(0) SOV/131-59-1-9/12

AUTHORS: Karklit, A. K., Petenkin, P. S.

TITLE: Conference of Young Specialists (Konferentsiya molodykh spetsialistov)

PERIODICAL: Ogneupory, 1959, Nr 1, pp 47-47 (USSR)

ABSTRACT: This conference of young specialists of the Vsesoyuznyy institut ogneuporov (All Union Institute of Refractories) was held in Leningrad on November 13-14, 1958, with the participation of representatives of the youth workers and the Ukrainskiy institut ogneuporov (Ukrainian Institute of Refractories). The conference should represent a show of young engineers and technicians. N. P. Gordeyev, head of the Institute, outlined in his opening speech the work of young specialists of various special branches, designating it as successful. Further, the following reports are mentioned: V. G. Yeger spoke about manufacturing methods of superstable pantiles made of boric siliceous races (borovichskaya "kremnevka").
N. V. Meshalkina reported on test results of the properties of magnesium solutions on liquid glass.
I. V. Vishnevskiy (UNIIO) reported on the dynamic method of determination of the modulus of elasticity at temperatures up to 1300-1400°.
G. G. Mel'nikova spoke about the examination of the changes of phase composition of worn-out refractory magnesite-chromite products.
N. V. Serkina reported on elaboration results of spectroscopic methods for the alumina content in types of clay.
V. G. Sleushch stated the causes of bar fracture of the press CM-143 by means of tensometration.
G. A. Koba used a tensometric transmitter for the automatic control of mold charging on the press SM-143.
V. M. Lebedev reported on the working out of the design for a new furnace cart.
V. Z. Shren reported on sample taking devices of a new system.
A. M. Levin reported on the design of water supply and canalization.
M. Z. Perel'man dealt with questions of air dust collection.
M. M. Perel'muter, Ye. A. Grechneva and others submitted a new variant for the foundation of a tunnel kiln.
A. Z. Verdel' reported on the beginning of operation and installation of a rotary furnace at the Borovichskiy kombinat.
As a principal default it was stated that part of the young specialists are still insufficiently familiar with the production. The measures provided for by the Party and Government to reform the universities and to strengthen their relations to works in operation shall improve the training of specialists.

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ASSOCIATION: Vsesoyuznyy institut ogneuporov (All-Union Institute of Refractories)

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KLYUCHAROV, Ya.V.; YEGER, V.G.

Interaction of magnesite-chromite with calcium oxide. Ogneupory 28 no.3: 126-133 '63. (MIRA 16:2)

1. Leningradskiy tekhnologicheskiy institut im. Lensoveta.
(Refractory materials) (Calcium oxide)

YEGER, V.G., inzh.

Interaction of magnesium oxide and magnesium chromite with calcium chromite. Trudy Inst. ogneup. no.34:45-63 '63. (MIRA 17:10)

YEGER, Yekaterian Ivanovna; LEBEDEV, Aleksandr Vasil'yevich; LEVINA, Dina Lipovna; NOVIKOVA, S.N., red.; KAPRALOVA, A.A., tekhn. red.

[Principles of statistics; textbook for training accountants of industrial enterprises] Osnovy statistiki; uchebnoe posobie dlia podgotovki bukhgalterov promyshlennykh predpriiatii. Izd.2., perer. i dop. Moskva, Gosstatizdat, 1963. 223 p. (MIRA 17:1)

YEGEREV, K.Ye. (Moskva)

Creep of carbinol glues used in soil stress analysis and in testing building materials. Izv.AN SSSR.Otd.tekh.nauk no.4: 152-154 Ap '56. (MLRA 9:8)
(Frozen ground) (Glue) (Creep of materials)

YEGHIEV, K.Ye., kand. tekhn. nauk.

Practical designs for reinforced concrete piles to be used in permafrost areas. Stroi. prom. 36 no.3:31-33 Mr '57. (MIRA 11:3)
(Frozen ground) (Piling (Civil engineering))

20-1-8/64

AUTHOR YEGEREV, K.Ye.

TITLE An Electrical Method for the Determination of the Tangential Reactions at the Lateral Surfaces of a Pile Frozen into the Ground.
(Elektricheskiy metod opredeleniya kasatel'nykh reaktsiy po bokovoy poverkhnosti vmoroshennoy v grunt nagrushennoy svai.- Russian)

PERIODICAL Doklady Akademii Nauk SSSR 1957, Vol 114, Nr 1, pp 33-36 (USSR)

ABSTRACT The Institute for the Investigations of Frost, Academy of Sciences of the USSR, adopted an electrical method for the measurement on nonelectrical magnitudes for the purpose of studying the changes in the state of stress of the ground around a pile frozen into the ground. In the paper under review, the author investigates the behavior of a hollow support in the form of a pile of the length H, the cross section F, and with the lateral surface x. This support is penetrated without friction through a layer of the thickness of the annual freezing depth and frozen into the ground in the depth h_2. With the aid of structural measures a longitudinal bending of the support was eliminated, and for this reason the pile will suffer in its

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entire elongation a simple compression as result of the load P. For the vertical forces acting upon the pile, we have the following equation of equilibrium: $F\sigma_{(y)} - P = 0$. In the cross sections, where $y \geqslant 0$, there are added to the sum of the forces into the direction just mentioned also the tangential reactions distributed over the lateral surface of the pile frozen into the ground:

$$F\sigma_{(y)} = P + u \int_0^y \tau_{(y)} dy = 0.$$

The normal stress $\sigma_{(y)}$ and the tangential stress $\tau_{(y)}$ are unknown in this context. The experimental investigations were conducted with electrotensometers of the form of wiretransmitters of ohmic resistances and with an electronic meter for deformations. The laboratory experiments provisionally supportes the theoretical conclusions. The investigations outdoors were conducted on the experimental field in Yakutsk from September to November 1954. A brief description of these investigations is given in the paper under review. They led to the following conclusions: The electrical method for the measurement of the elastic deformation in metallic piles permits a more precise elaboration on the state of stress of the for a long time frozen grounds in dependence on the temperature, the humidity, and the granulometric composition. In those areas where it is possible to build on basis

An Electrical Method for the Determination of the Tangential Reactions at the Lateral Surfaces of a Pile Frozen into the Ground.

of the principle of the conservation of the for a long time frozen ground as foundation soil for installations, the use of pile supports is economical.
(4 reproductions, 1 chart)

ASSOCIATION: Institute for the Investigation of Frost, Academy of Sciences of the USSR
PRESENTED BY: D.I. SHCHERBAKOV, Member of the Academy, 24.12. 1956
SUBMITTED: 14.8. 1956.
AVAILABLE: Library of Congress.

CARD 3/3

YEGEREV, Konstantin Yefimovich. SALTYKOV, N.I., prof., doktor tekhnicheskikh nauk, otv.red.; MUROMOV, L.A., red.; ZELENKOVA, Ye.V., tekhn.red.

[Designing reinforced concrete foundation and building frames subject to irregular setting] Raschet zhelezobetonnykh ramnykh fundamentov i karkasov pri neravnomernoi osadke opor. Moskva Izd-vo Akad. nauk SSSR, 1958. 58 p. (MIRA 11:8)
(Reinforced concrete construction) (Foundations)

YEGNEV, K.Ye., kand.tekhn. nauk

Device for measuring pressure in heaving grounds. Transp. stroi. 8 no.9:22-24 S '58. (MIRA 11:10)
(Frozen ground) (Soil mechanics)

YEGEREV, K.Ye.

Electric method of determining tangential reactions distributed along the lateral surface of a sunken pile frozen into the ground. Trudy Inst. merzl. AN SSSR 14:10-39 '58. (MIRA 11:8)
(Electric testing)
(Piling(Civil engineering))
(Frozen ground)

YEGEREV, K.Ye.

Calculations for frame foundations and frames in case of instantaneous uneven settling of supports. Trudy Inst. merzl. AN SSSR 14:104-107 '58. (MIRA 11:8)
(Structural frames)
(Foundations)
(Frozen ground)

AUTHOR: Yegorev, K.Ye. 20-119-2-7/60

TITLE: Relaxation of Tangential Stresses at the Lateral Surface of a Loaded Pole Frozen Into the Ground (Relaksatsiya kasatel'nykh napryazheniy po bokovoy poverkhnosti vmorozhennoy v grunt nagruzhennoy svai)

PERIODICAL: Doklady Akademii Nauk SSSR, 1958, Vol 119, Nr 2, pp 223-225 (USSR)

ABSTRACT: In 1954 the author determined the tangential reactions at the lateral surface of a loaded pole frozen into the ground (reference 1). Based on the results of the measurements of normal stresses $\sigma_{(y)}$ in the elastic material of the pole the tangential stresses $\tau_{(y)}$ determined from the equation $F\sigma_{(y)} - P + \Pi \int_0^y \tau_{(y)} dy = 0$. F denotes the area of the pole cross-section, P the external load and Π the circumference of the pole. In these measurements the following was found: With a constant value of a short external load the greatest values of $\tau_{(y)}$ were observed in the upper part of the pole,

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and these values decreased strongly in the lower part of the pole. In connection with the creeping of frozen ground a relaxation of the stresses occurred in the course of time and the stresses increased in the lower part. In this redistribution of stresses the length of the stressed upper part grew while the length of the not stressed lower part became smaller, this phenomenon is called "Creeping Approach of the Zero Point" by the author. The measurements on the open test ground of the Yakut Scientific Research Station for Frost of the AS USSR (Yakutskaya nauchno-issledovatel'skaya merzlotnaya stantsiya AN SSSR) lasted for 460 hours. The measurements are described. The measurements carried out lead to the following final conclusions: 1) W[illegible] given conditions of stress and length of pole in the redistribution of the tangential stresses the stresses in the upper part of the pole decrease due to their relaxation and in the lower part they increase a little without relaxation. 2) The permanent strength in the freezing together of sandy

where $\sigma(y) = 0$ and $t(y) \neq 0$.

Relaxation of Tangential Stresses at the Lateral Surface of a Loaded Pole Frozen Into the Ground 20-119-2-7/60

ground with duraluminium reached values of $\tau_{perm.}$ = 2,40 kg/cm^2 at ground temperatures of from -2.1 to -3.1°C. 3) The permanent strength of the freezing together of the same soil with an armed concrete pole at the same temperatures and the same humidity must have greater values as the surface of armed concrete is not/ rougher than the surface of the measuring tube of aluminum. There are 3 figures and 1 reference, 1 of which is Soviet.

PRESENTED: September 2, 1957, by D. I. Shcherbakov, Member, Academy of Sciences USSR

SUBMITTED: August 29, 1957

AVAILABLE: Library of Congress

Card 3/3

SALTYKOV, Nikolay Ivanovich. Prinimali uchastiye: YEGEREV, K.Ye.; ZHUKOV, V.F.. PORKHAYEV, G.V., kand.tekhn.nauk, starshiy nauchnyy sotrudnik, otv.red.; NIKOLAYEVA, I.N., red.izd-va; POLYAKOVA, T.V., tekhn.red.

[Foundation engineering in permafrost areas] Osnovaniia i fundamenty v raionakh rasprostraneniia mnogoletnemerzlykh gruntov. Moskva, Izd-vo Akad.nauk SSSR, 1959. 205 p. (MIRA 13:1)

1. Institut merzlotovedeniya imeni V.A.Obrucheva (for Porkhayev).

(Foundations) (Frozen ground)

YEGEREV, K.Ye.

Designing piles for constructing foundations on permafrost. Osn.,fund. i mekh.grun. no.3:7-9 '59. (MIRA 12:8)
(Piling (Civil engineering)) (Frozen ground)

YEGEREV, K.Ye., kand.tekhn.nauk

Building on frozen ground in seismic regions. Prom.stroi. 37 no.2:53-55 F '59. (MIRA 12:3)
(Frozen ground) (Earthquakes and building)

YEGERZV, Konstantin Yefimovich; SARKISYAN, R.M., kand.tekhn.nauk, otv.red.; AKIMOV, A.T., kand.tekhn.nauk, otv.red.; GRIGOR'YEV, Ye.M., red.izd-va; MAKUNI, Ye.V., tekhn.red.

[Electrotensiometry in studying relations between foundations and frozen ground] Elektrotenzometriia v issledovaniiakh vzaimodeistviia fundamentov s merzlymi gruntami. Moskva, Izd-vo Akad.nauk SSSR, 1960. 173 p.

(Foundations) (Frozen ground) (Tensiometers) (MIRA 14:2)

YEGEREV, K.Ye.

Dynamometer used in investigating the strained state of frozen ground at the footing of the foundation. Mat. k osn. uch. o merz. zon. zem. kory no.6:128-133 '60. (MIRA 13:10)
(Dynamometer) (Frozen ground) (Foundations)

YEGEREV, K.Ye.

Use of electrotensiometry in cryopedological investigations for engineering purposes. Mat. k osn. uch. o merz. zon. zem. kory no.5: 142-148 '60. (MIRA 13:10)
(Frozen ground) (Strain gauges)

YEGEREV, K. Ye. Doc Tech Sci -- "Study of the interaction between foundations of buildings and structures and ~~congealed~~ frozen, freezing, and thawing ~~base~~ (of the base) grounds," Mos, 1961, Acad Sci USSR. Inst of Permafrost Studies im V. A. Obruchev). (KL, 4-61, 193)

YEGEREV, K.Ye.

Strength of the freezing of ground to the foundation. Issl.po fiz. i mekh. merzl. grun. no.4:156-165 '61. (MIRA 14:12)
(Frozen ground) (Foundations)

YEGEREV, K. Ye.

Prospects for the development of research in determining the earthquake-resistance of structures. Trudy FTI Turk. fil. AN SSSR no.2:37-45 '50. (MIRA 16:1)

(Earthquakes and building)

YEGEROV, K.Ye.

Foundations of precast elements for industrial buildings on thawing soils. Osn. fund. i mekh. grun. 6 no.4:6-7 '64.
(MIRA 17:12)

L 04730-67 EWT(m)/EWP(j)/EWP(t)/ETI IJP(c) JD/JG

ACC NR: AP6027012 (N) SOURCE CODE: UR/0080/66/039/005/1186/1187

AUTHOR: Yegerev, O. I.; Pogorelyy, A. D.

39
B

ORG: none

TITLE: Equilibrium factor of fractionating K_2ZrF_6 and K_2HfF_6 on crystallizing from an aqueous solution

SOURCE: Zhurnal prikladnoy khimii, v. 39, no. 5, 1966, 1186-1187

TOPIC TAGS: crystallization, phase equilibrium, equilibrium constant, chemical precipitation, hafnium compound, zirconium compound, fluoride

ABSTRACT: The coefficient of the separation of Zr and Hf on crystallizing $K_2[Zr(Hf)]F_6$ from an aqueous solution was determined and found to be temperature dependent. Hf tends to concentrate in the liquid phase. The effectiveness of separating Zr and Hf by crystallizing their potassium hexafluorides is reduced at higher temperatures. The temperature dependence of k is approximated by $k = 0.883 \cdot 10^{-3}T + 0.17514$, where T is in °K. Values for the coefficient of separation of K_2ZrF_6 and K_2HfF_6 are: at 20°C, 0.4340; 40°, 0.4515; 60°, 0.4690; 80°, 0.4870. Orig. art. has: 2 tables and 4 equations.

SUB CODE: 07/ SUBM DATE: 01Sep65/ ORIG REF: 002

Card 1/1 UDC: 542.65+546.831'832'32'161

L 07414-67 EWT(1)/EWT(m)/ETI/EWP(t) IJP(c) JD

ACC NR: AP6032849 SOURCE CODE: UR/0020/66/170/003/0544/0547

AUTHOR: Yegerev, V. K.

ORG: All-Union Extramural Polytechnic Institute (Vsesoyuznyy zaochnyy politekhnicheskiy institut)

TITLE: Solution of equations for diffusion within multilayer active media with linear interrelationships

SOURCE: AN SSSR. Doklady, v. 170, no. 3, 1966, 544-547

TOPIC TAGS: heat sink, heat source, Green function, heat diffusion

ABSTRACT: This paper presents a method for solution of the equation:

$$u_t' = D\Delta u + ku$$

The above equation describes diffusion or thermal conduction processes in media containing heat source ($k > 0$) or heat sink ($k < 0$). Solution in general form is possible by means of Green's functions or Greenberg's transformations. The author develops a mathematical solution of this equation for a particular case of a medium containing several (n) flat layers with solid (impenetrable) outer boundaries of the system

$$(u_1)_x'|_{x=0} = 0; \quad (u_n)_x'|_{x=l_n} = 0,$$

Card 1/2 UDC: 518.61

L 07414-67

ACC NR: AP6032849

For each layer, the thickness δ_j, the coefficient of diffusion D_j, and the constant describing the heat source (or heat sink) k_j are assumed to be known (see fig. 1).

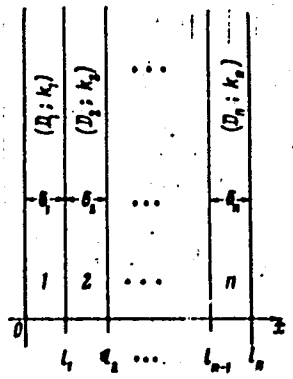

Fig. 1

Substitution $u_j = U_j e^{-kjt}$ is used, and then the Laplace transforms with boundary conditions corresponding to each layer. Thus the author obtains a system of $2n$ equations. This system is rewritten with the use of operators Δ, Δ_{A_j}, Δ_{B_j} (where A_j and B_j are coefficients in the equations). By this method, the solution of the equation system is reduced to the graphical solution of equations $\Delta = 0$, $\Delta_{A_j} = 0$, and $\Delta_{B_j} = 0$ for several roots. The precision of the solution will depend solely on the precision of the roots found in the graphical solution of equation $\Delta = 0$. The proposed method is applicable to the analysis of complex biological processes. Presented by Academician I. Ye. Tamm on 31 May 1966. Orig. art. has: 15 formulas, 1 figure.

SUB CODE: 12,20/ SUBM DATE: 30May66/ ORIG REF: 009

Card 2/2

NIKOLAYEV, A.N.; GLADCHENKO, I.P.; NESVETOV, N.V.; YEGEREV, V.N.

Experience in the use of plastics in construction. Plast.massy no.10:55-59 '63. (MIRA 16:10)

YEGEREV, V.S., arkhitektor

Palace of Pioneers and Students. Gor.khoz.Mosk. 36 no.8:3-5 Ag '62. (MIRA 16:1)

(Moscow—Public buildings)

S/117/60/000/012/016/022
A004/A001

AUTHORS: Os'machko, A., Luganskaya, V., Yegerev, Yu.

TITLE: Friction Disks Made of Plastics

PERIODICAL: Mashinostroitel', 1960, No. 12, pp. 36-37

TEXT: The authors report on tests which were carried out at their plant to determine the efficiency of plastics friction disks for electromagnetic couplings of metal-cutting machine tools. These disks were introduced at the plant to replace steel disks with metal-ceramic lining whose cost price was too high. The Central Plant Laboratory developed a material corresponding to the main requirements of friction couplings. This material is composed of fibrous asbestos - 22%, carborundum - 14%, silver graphite - 15%, powdered tin - 5% and polyester resin solution - 44%. All fillers being used in the composition should be free from fatty acids. The carborundum powder is mixed with the powdered metallic tin and graphite, then the fibrous asbestos is added and the mixture is pulverized in a mortar until it forms a homogeneous mass. Then the polyester resin is added to the mixture. Prior to applying the mixture to the disks, holes are drilled into the latter in order to ensure a strong adhesion between the disk and plastic

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A004/A001

Friction Disks Made of Plastics

lining. The plastics mixture is applied to both sides of the disk, covering the disk with a layer of 1.5 mm thickness. A pressure of 3-4 kg is exerted on the disk, placed in a special fixture. Then the disk with the fixture is placed in a drier for the polymerization of the binder. The disks are held in the drier for 3-4 hours at 110°C, then cooled down to room temperature with subsequent mechanical working. The other disk of the friction couple was made of grade 20 steel hardened up to HRC 55-62. The friction disks were tested on an electromagnetic coupling placed in the kinematic circuit of the longitudinal table feed of the 6 12 (6L12P) vertical milling machine. The coupling was set for the transmission of a torque of M_t = 8 mkg in an oil medium. The tests were carried out from April, 1959, to August, 1960, after which the coupling was removed from the milling machine and checked on a special stand. The torque of 8 mkg remained constant, while practically no wear could be observed. An inspection of the disk exterior proved that the plastic showed a strong adhesion to the metallic base of the disk. There were no cracks, no breaking or peeling off of the plastic material.

Card 2/2

YEGEREVA, I.V.

Characteristics of the nutrition of Volga fishes feeding on benthos under the conditions of Kuybyshev Reservoir. Vop. ekol. 5:60-61 '62. (MIRA 16:6)

1. Tatarskoye otdeleniye Gosudarstvennogo nauchno-issledovatel'skogo instituta ozernogo i rechnogo rybnogo khozyaystva, Kazan'.
(Kuybyshev Reservoir--Fishes--Food)

YEGEREVA, Lidiya Ivanovna; RYBAKOVA, V.D., red.; PONOMAREVA, A.A., tekhn. red.

[Production and distribution balance of an agricultural production unit; method for preparation] Balans proizvodstva i raspredeleniia produktsii sel'skogo khoziaistva; metodika sostavleniia. Moskva, Ekonomizdat, 1963. 146 p. (MIRA 16:12)

(Agriculture—Economic aspects)

VAZINGER, Alevtina Vasil'yevna; YEGEREVA, N., red.; SHAVEL'SKAYA, T., otv. za vypusk; YURGANOVA, M., tekhn. red.

[Natural conditions and feed resources of Chita Province] Prirodnye usloviia i estestvennye kormovye resursy Chitinskoi oblasti. Chita, Chitinskoe knizhnoe izd-vo, 1959. 126 p. (MIRA 14:10)

(Chita Province--Physical geography)